



Hallandale Beach  
PROGRESS. INNOVATION. OPPORTUNITY.

## Sustainability Action Plan



## SUSTAINABILITY BRANDING

The City has approved a Green Initiatives logo in order to highlight the City's sustainable initiatives and projects. Any City program or policy that espouses the principles of sustainability may use this logo in the future. The portfolio of projects will represent a clearinghouse of sustainable government operations that visibility communicate the City's investments to the public.

Project managers interested in developing and implementing a sustainability project could apply to the newly created City Sustainability Committee in order to use the logo. The logo will be awarded to projects that meet specific sustainability performance criteria. Projects that earn this logo could receive priority treatment during the project approval and budgeting processes.

This program will operate similarly to Broward County's "Seal of Sustainability" program, which demonstrates the County's commitment

to sustainable operations. A catalogue of qualifying projects is maintained on the Broward County website, and the seal is affixed to qualifying projects, such as the County's propane-fueled "TOPS" mini-buses.

## GREENHOUSE GAS MITIGATION EDUCATION AND OUTREACH CAMPAIGN

The City will create an education and outreach campaign to engage citizens and businesses in GHG reduction efforts, beginning with a survey, to understand community members' attitudes and behaviors concerning climate change action. The goal will be to identify common concerns, raise awareness and find sustainability champions to support the City's efforts to go green. Using survey results as a baseline knowledge assessment, the City will create a public outreach campaign that engages and educates residents on the City's GHG mitigation, resilience and sustainability efforts.



Action





## Action

# FUNDING & EVALUATION

Sustainability requires investment. By focusing on quick wins with big returns, the City can leverage its success and prove that low-impact, efficient and responsive government makes financial sense. These successes can help pave the way for other, lower ROI projects, which are no less important for community members and the environment.

The City has already begun investing in cost-effective solutions that will reap long term economic, social and environmental rewards. However, more direct investment is required. The City will also focus on attracting external resources, such as low-interest loans, grants and incentives from federal, state, local and private sources. Many of this SAP's projects are eligible for such support. With the newly established grants development office this focus is now possible.

Sustainability requires evaluation and as projects are implemented, progress must be measured at regular intervals to ensure that the projects are performing as planned. In some cases, the City may make adjustments or course corrections to ensure desired results are obtained. It is necessary to measure the success of a sustainability program in order to manage it effectively. It has been said that, "you are what you measure".

The STAR Community Rating System (STAR) is the nation's first voluntary, self-reporting framework for evaluating, quantifying, and improving the livability and sustainability of U.S. communities. Used as an evaluation tool, STAR facilitates meaningful comparisons of cities' sustainability performance, addressing social, economic and environmental aspects of the community.

As a first step towards certification, the SAP Project Management Team used STAR to benchmark, Hallandale Beach's sustainability progress to three similar communities (Pinecrest, FL, Park Forest, Illinois and Broward County, Florida). The team also performed a feasibility assessment to determine if the City is ready to pursue STAR certification. The results show that Hallandale Beach is comparable to its regional peers, with the potential to earn a 3-STAR rating. City Commission acceptance of this SAP will authorize the path to STAR certification for the City to begin.

See the Appendix for the results of benchmarking and the Star Communities Certification project in this section for the City's next steps towards STAR certification.



### UTILITY MANAGEMENT SYSTEM

- NPV: \$19,000
- ROI: 36%
- Contribution to Goal: 90%
- Lead Department / Division: Innovation Technology
- Responsibility: IT Director

### REVOLVING FUND

- NPV: 0%
- ROI: ∞\*
- Contribution to Goal: \*\*
- Lead Department / Division: Finance
- Responsibility: Finance Director

### COMPLETE A GREENHOUSE GAS INVENTORY

- NPV: -24,000
- ROI: -100%
- Contribution to Goal: \*
- Lead Department/Division: Public Works
- Responsibility: Green Initiative Coordinator

### STAR COMMUNITIES CERTIFICATION

- NPV: -\$13,000
- ROI: -100%
- Contribution to Goal: 0%
- Lead Department/Division: Public Works
- Responsibility: Green Initiatives Coordinator

\*For projects with low or no cost, the return on investment is mathematically infinite, denoted by the symbol: ∞  
 \*\*The contribution of this projects to goal cannot be calculated at present but will be calculated as projects and project ideas are further developed.

# PROJECTS

The City will strive to achieve the financial performance projected for the portfolio of projects included in this plan. It will also plan to establish new internal mechanisms for ensuring that these projects have the required resources to move forward. Sustainability and resiliency must become embedded in the annual budget development process. The revolving fund project will help make this happen.

A well-designed evaluation process will make the entire sustainability program more effective, and will also allow the City to communicate its progress to a wide variety of stakeholders. Evaluation requires a comprehensive but focused system for collecting, managing and analyzing data, a schedule, means of obtaining feedback from stakeholders and a provision for continual improvement. Three projects will help advance these concepts, including Utility Management System, complete a Greenhouse Gas Inventory and STAR Communities Certification.

## UTILITY MANAGEMENT SYSTEM

Integrating utilities (electric, water and other commodity billings) into a software solution or database can track, trend and report on utility use and help verify results from energy efficiency investments. Typically, this can result in energy savings ranging from 1-10% from prioritizing investments, identifying erroneous billings and learning of anomalies before they become costly.

For this project, the City will utilize software tools to manage the City's FPL energy utility bills on a monthly basis. The effort will include auditing bills, tracking usage and costs, benchmarking facility performance, tracking the results of energy savings projects, analyzing trends and reporting on performance. Over time, the City will expand the tool to include other facilities-based utilities and services, including water and waste.

Such a system enables much more creative control of the City's resource use. For example, it would enable departments to be assigned a "budget" for resource use and to be "charged" for utilities. It also supports the accounting systems required to implement a revolving fund that will support long-term investment in sustainability projects at the department level.

Direct economic benefits of this project are conservatively estimated at one percent of electricity expenditures, with a net present value of \$19,000 over the 10 year project life. Other benefits include facilitating sustainability reporting and program management, and the potential to identify additional

cost savings through use of the tool. Implementing the project will require selecting and procuring a utility management solution. The City will also populate the free, online ENERGY STAR Portfolio Manager with facility utility data. Costs are estimated at \$50,000 for an off-the-shelf Utility Management Solution, including implementation, configuration, customization, interfaces and training, with an additional annual software licensing fee of \$2,500 per year.

## REVOLVING FUND

Measures designed to save resources can be highly cost effective. However, these measures require sustained investment to fully realize benefits. A revolving fund is a method of providing on-going access to capital for "green" projects. Initially, the revolving fund is "seeded" with capital. Sources include appropriations, grants, rebates and savings from existing projects. The fund invests in resource conservation projects with repayments from savings going back into the fund and thus helping to finance new projects. Cost savings realized from high ROI projects are leveraged to help fund low ROI, but environmentally or socially impactful projects. This approach reduces the amount of funding needed from the City's General and Enterprise Funds.

The projects included in this SAP will return over \$8 million in revenue and avoided costs over 10 years. The revolving fund will allow these returns to be reinvested in other green initiatives as time goes on, allowing continual improvement and expansion of the sustainability program.



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The City should establish a revolving fund for the recommendations included in this plan. A Revolving Fund Management Committee will develop and administer policies, approved by the City Commission, for fund management, including criteria for eligible energy and water efficiency projects and financial performance. Project performance will be monitored and verified. **The following steps will be needed:**

- Establish a Revolving Fund Management Committee
- Create an accounting and financial procedures plan
- Develop guidelines designating which projects qualify for funding
- Identify funding sources for seed capital
- Establish procedures for tracking performance of funded projects
- Establish procedures for reinvesting project savings in new projects

No additional costs besides staff time will be needed to set up the revolving fund.

### COMPLETE A GREENHOUSE GAS INVENTORY

A Greenhouse Gas (GHG) Inventory is an essential element of the City's sustainability baseline which will help the City to understand the magnitude and sources of GHG emissions. The GHG inventory will also allow Hallandale Beach to measure progress in GHG mitigation going forward and will identify the most significant emissions sources so the City can develop policies to address the issue. Completing an inventory will be the first step towards honoring the City's U.S. Climate Mayors commitment to uphold the Paris Climate Agreement, which was adopted on August 16, 2017 by Resolution 2017-91. This project will allow the City to create a targeted set of consistent policies, strategies and projects aimed at reducing emissions and establish goals for emissions reduction.

In late 2017, the City applied for grant funding to conduct the inventory through the Community Foundation of Broward's ECO Broward Grant. This proposal was unsuccessful, however staff will resubmit for funding in future grant cycles. Once funding is secured, the City will issue a Request for Quotes and select a qualified firm to develop the inventory for both local government operations and the community as a whole. The inventory will be based on established protocols such as those developed by the International Council for Local Environmental Initiatives (ICLEI), using web-based inventory software such as ICLEI's ClearPath tool. It will require a substantial data collection effort which will be integrated with sustainability data collected for the SAP.

The completed inventory will allow the City to benchmark GHG emissions against peer cities, forecast emissions trends under business as usual scenario and set informed and achievable emissions reductions goals. Costs of developing the inventory are estimated at \$24,500. Benefits include allowing the City to pinpoint facilities and infrastructure with above-average carbon footprints, potentially exposing inefficiencies that could lead to cost savings. The GHG Inventory will also give the City a reference point for evaluating the carbon mitigation benefits of potential sustainability projects to determine those opportunities that offer the best value to the City.




## STAR COMMUNITIES CERTIFICATION

STAR is premised on a framework of sustainability goals, objectives and evaluation measures. This framework is comprised of 526 indicators within the following areas:

- Climate and Energy
- Built Environment
- Economy and Jobs
- Education, Arts and Community
- Equity and Empowerment
- Health and Safety
- Natural Systems

STAR rates communities on a 5-point scale and awards leadership certifications for 3-STAR, 4-STAR and 5-STAR ratings. Certified STAR communities are part of a select group. Currently, there are nearly thirty 3-STAR communities nationwide, and five in Florida, including Monroe County, the City of St. Petersburg and the Village of Pinecrest. Broward County and West Palm Beach are currently the only 4-STAR communities in Florida, and there are only four 5-STAR communities nationwide.

### These include:



Baltimore, Maryland  
Cambridge, Maine  
Northampton, Maine  
Seattle, Washington



Action





## Action

Hallandale Beach has completed the initial feasibility assessment step towards STAR certification. Based on the results of this initial assessment, the City should be able to achieve a 3-STAR rating. This project will take the next steps towards achieving STAR certification by collecting and analyzing data and compiling application materials.

Once the City is ready to report, it must subscribe to the STAR Full Access Package to access the full suite of tools and resources. After that, the City will create a certification team composed of internal staff members or an external green team comprised of community members. Over the following months, the City will align existing City policies and programs with the Rating System, gather data and enter it into STAR's online reporting platform and submit the online application for verification by STAR. Once awarded, the STAR Community Rating is valid for four years, after which the City will have the opportunity to rectify and potentially improve its rating. This effort is important not only for sustainability reasons but also for future financing of major projects. Rating services like Moody's, Standard and Poor's and Fitch are all considering making sustainability and resiliency an element of establishing credit ratings for city debt. This is a very important factor in establishing interest rates.

The annual cost of subscription to the STAR Full Access Package is \$1,000, plus a one-time verification fee of \$3,000. The certification process will be completed by City staff, possibly with the help of a community green team. Direct economic benefits have not been estimated at this time, but the process will help the City track and evaluate performance and communicate progress to stakeholders. The City will also have the opportunity to learn from and adopt best management practices included in the STAR framework. Achieving a 3-STAR rating would result in positive press and greatly enhance the City's sustainability brand.

## FUTURE STEPS

### SET GHG EMISSIONS REDUCTION TARGETS

Once a GHG Inventory has been completed, the City should adopt specific targets for GHG emissions reductions both for government operations and major private pollution sources. The goals should align as much as possible with those set by other local governments in the South Florida region, as greenhouse gases don't respect political boundaries. Miami-Dade and other Compact counties follow the GHG emissions reduction goals set by the U.S. Cool Counties Climate Stabilization Declaration in 2008. These targets include an 80% emissions reduction by 2050 from 2008

levels. In order to achieve this goal, Miami-Dade County's set interim targets of 20% emissions reduction from 2008 levels by 2020 and a 10% reduction over every five-year period through 2050. Broward County has set a goal to reduce emission 15% from 2015 levels by 2020 and 80% by 2050.

### NON-MARKET VALUATION OF SAP PROJECTS

Many environmental and social benefits are not recognized by the economy. For example, clean air and water are not traded on the stock exchange. The value of healthy and productive employees is not typically included when considering investment in a building renovation. As a result, environmental and social benefits may be undervalued and decisions regarding sustainability projects may not accurately reflect their true value to the community.

Economists often label the economic value of environmental and social goods and services as "non-market" values because they are not traded in markets. All projects in the SAP have non-market value. Some projects consist mostly of non-market value. Examples include the plan's Land Use and Transportation and Natural Resources and Resilience projects. Estimating non-market values could dramatically change the relationship between the perceived benefits and costs of these projects.

There are many methods for calculating non-market values. One increasingly widespread framework for evaluating one aspect of non-market value is the social cost of carbon. The social cost of carbon is an estimate of the long-term damage done by a ton of carbon dioxide to agricultural productivity, human health and property as a result of climate change. However, due to modeling and data limitations, it does not include all social costs.





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As the City's sustainability management matures, use of non-market values should be considered. For example, as part of a proposed greenhouse gas inventory, each SAP project's expected contribution to reduced carbon dioxide emissions could be estimated. These avoided emissions could be assigned a value based on the social cost of carbon. Other non-market values could also be estimated, such as the benefit of reduced air or water pollution, increased productivity or reduced traffic congestion. In doing so, the City should take care to establish clear standards for including estimates of non-market values into its projects that can achieve wide acceptance among its stakeholders.

### SUSTAINABILITY FEES

The City receives revenue from a variety of fees associated with its regulatory authority, particularly with respect to compliance with its codes and standards, as well as approval of development proposals. A portion of this existing revenue, or new fees, could be allocated to staff, projects, programs and other initiatives that improve the City's economic, social and environmental performance.

The Village of Pinecrest funds sustainability projects with fees collected through its permitting system. The Expedited Permit Program charges a higher fee to review building permits. Revenues from this program are earmarked for the Village's Sustainability Fund. The City of Jacksonville has established a citizen board that manages a fund sourced from environmental compliance violations. The board awards grants for community sustainability projects on a competitive basis. Miami Beach's Green Building Ordinance requires participants to post a Sustainability Fee Bond equal to five percent of the total construction value. Participants are refunded the fee based on their level of compliance with the City's green building requirements. Only the highest levels of attainment receive the full refund. Non-compliance results in the City retaining 100% of the fee. Fees collected directly fund the City's sustainability efforts.







## CITY OF HALLANDALE BEACH SUSTAINABILITY ACTION PLAN PROJECT MANAGEMENT FORM SUMMARY

### FE3. COMPLETE A GHG INVENTORY AND SET REDUCTION TARGETS

#### PROJECT IDENTIFICATION:

Project ID:	FE3
Project Name:	Complete a GHG Inventory and Set Reduction Targets
Focus Area:	Resource Conservation & Efficiency
Year Established:	2018
RESPONSIBILITY:	
Project Manager:	Green Initiative Coordinator
Department:	Public Works
PERFORMANCE:	
Net Present Value:	-\$24,000
Return on Investment:	-100%
Project Life:	1 years
GOALS:	
Focus Area Goal:	Measure and monitor 50% of sustainability key performance indicators by 2022 relative to 2013 baseline
<i>Project Contribution:</i>	of Focus Area Goal

#### PROJECT DESCRIPTION:

- a. Objective
- b. Measure(s)
- c. Action
- d. Cost(s)/Benefit(s)
- e. Funding

- a. Objective: Aid the City in understanding the magnitude and sources of GHG emissions community-wide and in doing so, gain a better understanding of which sectors in the community are most heavily contributing to climate change. The Inventory will also allow the City to create a targeted set of consistent policies, strategies and projects aimed at reducing emissions. The eventual GHG inventory and targets will be folded in the Sustainability Action Plan.
- b. Measure(s) The GHG inventory will map emissions by sector and will be a quantitative study that will identify opportunities and solutions to reduce the City's emissions. The inventory will use 2016 as a baseline year and subsequent evaluations will track energy consumption, emissions (carbon dioxide equivalency) etc. against this year. The City will continually evaluate yearly progress and fine tune projects to achieve desired results. Each project that the City will undertake will be tied to a quantitative reduction target and an actual realized value. The effectiveness of the program or policy can be monitored through tracking reductions in GHG emissions over time.
- c. Actions: Receive grant funding, Issue a Request for Quotes, select firm and negotiate Scope of Work. Hold Kick-Off Meeting with City Staff to discuss Scope of Work and project schedule. Collect data, both – internal (water/wastewater, fuel and electricity use, fleet operations etc.) and external (industrial, commercial and residential electricity, natural gas and fuel oil consumption, transportation and solid waste disposal). Develop GHG inventory using web-based inventory software such as the International Council for Local Environmental Initiatives (ICLEI) ClearPath software. Benchmark Hallandale Beach against peer cities, forecast emissions trends under business as usual scenario, set tangible emissions reductions goals, and incorporate GHG inventory into SAP.
- d. Cost/Benefits: Estimated costs are \$24,500. Benefits are not quantifiable. However, the Inventory will allow the City to pinpoint areas (ex: buildings and/or roadways) that are in need of improvement – both internally and community-wide. The Inventory will help staff make the case for implementing future sustainability projects, as it will forecast emissions that will be expected to occur under business as usual and potential future action scenarios.
- e. Funding: Grant funding will be sought to fund this project (e.g. the ECO Broward grant)